

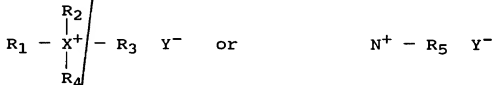
✓ Please add the following new claims:

-- 48. Apparatus, comprising:

means for enabling visual observation of proper placement of an endotracheal tube in the trachea of a patient, said means comprising:

a. an endotracheal apparatus which includes a tracheal tube defining a gas path; and

b. a CO₂ detector disposed within said endotracheal apparatus at a location which is in said gas path of said tube and is visible when said endotracheal tube is inserted, said detector comprising a backing and an indicator material, said indicator material comprising a support material, a pH-sensitive dye, and a phase transport enhancer for enhancing a reaction between a gas (such as) CO₂ and said pH-sensitive dye, said phase transport enhancer having the formula:



wherein X = N or P,

R₁, R₂, R₃ and R₄ are selected from the group consisting of C₁-C₁₂ alkyl,

C₁-C₄ substituted alkyl wherein the substituent is a C₁-C₄ alkyl or phenyl group, naphthyl,

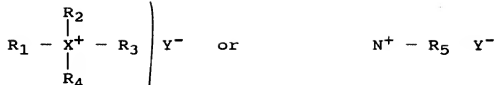
benzyl, and
pyridine;

R₅ is selected from the group consisting of
C₁-C₁₂ alkyl and benzyl; and

Y⁻ is an anion selected from the group
consisting of hydroxide, fluoride, chloride,
bromide, iodide, carbonate and tetrafluoroborate.

49. Apparatus as recited in claim 48, wherein said
phase transport enhancer is selected from the group
consisting of tetrabutylammonium hydroxide,
tetrabutylammonium chloride, tetraethylammonium
bromide, tetraethylammonium p-toluenesulphonate,
phenyltrimethylammonium chloride, benzyltrimethyl-
ammonium bromide, tetra-n-propylammonium bromide,
benzyltriethylammonium tetrafluoroborate, n-
dodecyltrimethylammonium bromide, tetraphenyl-
phosphonium chloride, n-hexadecylpyridinium bromide
and triphenylmethyltriphenylphosphonium chloride.

50. A tracheal intubation apparatus, comprising:
means for receiving gas expired from a person; and
a detector disposed within said means for visually
indicating whether a substantial concentration of
CO₂ is present in said gas, wherein said detector
comprises indicator material which changes from one
color in the presence of CO₂, and changes to
another color in response to an absence of CO₂,
said indicator material comprising a support
material, a pH-sensitive dye, and a phase transport
enhancer for enhancing a reaction between (a gas
(such as) CO₂ and said pH-sensitive dye, said phase
transport enhancer having the formula:



wherein X = N or P,

R₁, R₂, R₃ and R₄ are selected from the group consisting of C₁-C₁₂ alkyl,

C₁-C₄ substituted alkyl wherein the substituent is a C₁-C₄ alkyl or phenyl group, naphthyl, benzyl, and pyridine;

R₅ is C₁-C₁₂ alkyl or benzyl; and

Y⁻ is an anion selected from the group consisting of hydroxide, fluoride, chloride, bromide, iodide, carbonate and tetrafluoroborate.

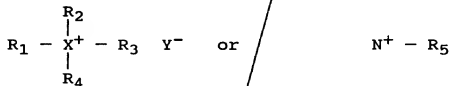
51. A tracheal intubation apparatus, comprising:
means for receiving gas expired from a person;
and

a detector disposed within said means for visually indicating whether a substantial concentration of CO₂ is present in said gas; wherein said detector comprises a phase transport enhancer and a dye solution applied to a support material, said phase transport enhancer enhancing a reaction between a gas such as CO₂ and said dye solution.

52. A breath indicator comprising:

- a. means for receiving CO₂;
- b. a detector disposed within said means for receiving CO₂, said detector comprising means for changing between a first color and a second color, said first color indicating an absence of CO₂ and

said second color indicating a presence of CO₂, said means for changing between a first color and a second color comprising indicator material, said indicator material further comprising a dye and a phase transport enhancer for enhancing a reaction between [a gas such as] CO₂ and said dye, said phase transport enhancer having the formula:



wherein X = N or P,

R₁, R₂, R₃ and R₄ are selected from the group consisting of C₁-C₁₂ alkyl,

C₁-C₄ substituted alkyl wherein the substituent is a C₁-C₄ alkyl or phenyl group, naphthyl, benzyl, and pyridine;

R₅ is C₁-C₁₂ alkyl or benzyl; and

Y⁻ is an anion selected from the group consisting of hydroxide, fluoride, chloride, bromide, iodide, carbonate and tetrafluoroborate.

53. A breath indicator comprising:

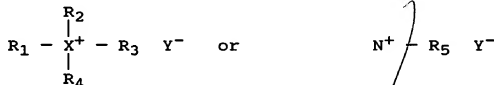
- a. means for receiving CO₂;
- b. a detector disposed within said means for receiving CO₂, said detector comprising means for changing between a first color and a second color, said first color indicating an absence of CO₂ and said second color indicating a presence of CO₂, said means for changing between a first color and a second color comprising indicator material, said

indicator material comprising a support material, a pH-sensitive dye applied to said support material, and a phase transport enhancer for enhancing a reaction between a gas such as CO₂ and said pH-sensitive dye.

54. A method for determining the proper placement of an endotracheal intubation device comprising the steps of

(1) inserting a device into the trachea of a patient, said device comprising:

- B1*
(continued)
- (a) an endotracheal apparatus which includes a tracheal tube defining a gas path; and
 - (b) a CO₂ detector disposed within said endotracheal apparatus at a location which is in the gas path of said tube and is visible when said endotracheal tube is inserted, said detector being capable of indicating whether a substantial concentration of CO₂ is present in said gas, said CO₂ detector comprising a backing, and an indicator material, said indicator material comprising a solid phase support, a pH-sensitive dye, and a phase transport enhancer for enhancing a reaction between [a gas such as] CO₂ and said pH-sensitive dye, said phase transport enhancer having the formula:



wherein X = N or P,

R₁, R₂, R₃ and R₄ are selected from the group consisting of C₁-C₁₂ alkyl,

C₁-C₄ substituted alkyl wherein the substituent is a C₁-C₄ alkyl or phenyl group, naphthyl, benzyl, and pyridine;

R₅ is selected from the group consisting of C₁-C₁₂ alkyl and benzyl; and

Y⁻ is an anion selected from the group consisting of hydroxide, fluoride, chloride, bromide, iodide, carbonate and tetrafluoroborate; and

(2) observing a color change of the indicator which indicates the presence of CO₂ in the respiratory gas and thereby the proper placement of the endotracheal tube.

55. The method of claim 54, wherein said phase transport enhancer is selected from the group consisting of tetrabutylammonium hydroxide, tetrabutylammonium chloride, tetraethylammonium bromide, tetraethylammonium p-toluenesulphonate, phenyltrimethylammonium chloride, benzyltrimethylammonium bromide, tetra-n-propylammonium bromide, benzyltriethylammonium tetrafluoroborate, n-dodecyltrimethylammonium bromide, tetraphenylphosphonium chloride, n-hexadecylpyridinium bromide